INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 2000	**Park:** Shenandoah NP
Principal Investigator: James Galloway	**Office Phone:** 804-024-1303 **Email:** jng@virginia.edu
Address: Dept of Environmental Sciences University of Virginia PO Box 400123 Charlottesville, VA 22904-4123 US	**Office Fax:** 804-982-2300

Additional investigators or key field assistants (first name, last name, office phone, office email):

Name: Rick Webb **Phone:** 804-924-7817 **Email:** n/a

Permit#:
SHEN1999N-38

Park-assigned Study Id. #:
unknown

Project Title:
Shenandoah Watershed Study (N-38)

Permit Start Date: Jan 01, 2000	**Permit Expiration Date** Jan 01, 2000
Study Start Date: Jan 01, 1990	**Study End Date** Jan 01, 2002

Study Status:
Continuing

Activity Type:
Research

Subject/Discipline:
Water Resources

Objectives:
Routine:(1) evaluation and interpretation of hydro-biogeochemical conditions in watershed;(2) baseline monitoring and detection of change in hydro-biogeochemical conditions. 2000 only: (1) collection of soil data to support application of an acidification model (MAGIC); (2) collection of tree cores to support investigation of possible linkage between the base-cation status of soils and forest vegetation.

Findings and Status:
Weekly stream-water samples were collected for analysis from 6 SNP streams (North Fork of Dry Run, Deep Run, White Oak Run, Paine Run, Staunton River, and Piney River). Quarterly stream-water samples were collected from 9 additional streams. The quantity and chemistry of precipitation is determined for two locations (in the Deep Run/White Oak Run/Madison Run area and in the Shaver Hollow Research Natural Area). Continuous stream discharge measurements are obtained for five streams. Field research underway during the year includes studies of hydrologic and soil controls on stream-water chemistry. Soil samples were collected and analyzed for base properties, as well as carbon and nitrogen content, for 80 sites; tree cores were obtained for analysis of base cation content from 3 northern red oak trees at each of 26 sites.

For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?
Yes

Funding provided this reporting year by NPS: 96109	**Funding provided this reporting year by other sources:** 30027

Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college

Full name of college or university:	**Annual funding provided by NPS to university or college this reporting year:**

University of Virginia	96109